

## **The influence of zero-hours contracts on care worker wellbeing**

### **Abstract**

**Background:** Care workers have an important social role which is set to expand with the increasing age of the UK population. However, the majority of care workers are employed on zero-hours contracts.

**Aims:** Firstly, to investigate the relationship between working conditions and employee outcomes such as engagement and general mental wellbeing in a sample of UK care workers and management. Secondly, to assess whether the use of zero-hours contracts affects employee wellbeing.

**Methods:** A cross-sectional survey of domiciliary care and care home employees, undertaken using the Management Standards Indicator Tool (MSIT), Utrecht Work Engagement Scale (UWES) and General Health Questionnaire (GHQ). T-tests and multivariate linear regression evaluated the differences in scoring between those with differing contractual conditions and job roles, and associations of MSIT scores with UWES and GHQ factors.

**Results:** Employee understanding of their role and job control were found to be priority areas for improvement in the sample. Similarly care workers reported greater occupational demands and lower levels of control than management. However, while zero-hours contracts did not significantly influence employee wellbeing, these employees had greater levels of engagement in their jobs. Despite this a greater proportion of individuals with zero-hours contracts had scores above accepted mental health cut-offs.

**Conclusions:** Individual understanding of their role as care workers appears to play an important part in determining engagement and general mental wellbeing. However, more research is needed on the influence of zero-hours contracts on wellbeing, particularly in groups with increased likelihood of developing mental health disorders.

**Key words:** Engagement, Health care workers, Mental health, Working conditions, Zero-hours contracts

## Introduction

It is well known that working conditions can have adverse effects on the physical and psychological health and wellbeing of workers. The INTERHEART studies [1] found that chronic psychological stress was very strongly linked to the development of coronary heart disease (CHD). The association found between the two was as strong as the association between factors already known to influence CHD risks, such as blood pressure and smoking. Similarly, the Whitehall-II studies demonstrated that chronic workplace stress is a risk factor for health conditions which heighten the likelihood of developing cardiovascular disease [2]. Furthermore, work stress is associated with metabolic syndrome, a series of risk factors which increase the likelihood of developing cardiovascular disease, type 2 diabetes [3] and depression [4] among many other adverse health outcomes.

The job demand-control-support model (JDCS [5]) of occupational stress theorises that high levels of demand and low levels of control and peer support may lead to strain reactions in employees [6]. In 2004 the United Kingdom (UK) Health and Safety Executive (HSE) released a set of 'management standards', partially based on the JDCS [7] and an accumulation of other evidence, which identifies seven stressors which have the potential to have a negative effect on employee wellbeing. Since their release these seven factors, together with the indicator survey tool (MSIT), have been used to assess psychosocial working conditions in numerous public sector and private organisations. For example, (author names removed for review) [8] used the MSIT with a sample of public sector workers, and Edwards and Webster [9] used it in a number of public and private organisations. However psychosocial working conditions have never been investigated in care and/or support workers by using the HSE management standards.

Maintaining the wellbeing of carers in both their professional and personal lives is of significant importance, given the role that they undertake and the responsibilities they carry, which include giving medication, meal preparation and personal care for those who cannot do so for themselves

[10]. Employee engagement, which reflects a positive mental attitude at work which is both persistent and ubiquitous [11], is argued to be a key component of employee performance and wellbeing in the care sector, and specifically in hospitals. For example, West and Dawson [12] found that engagement is linked to both worker and patient outcomes in the UK National Health Service (NHS). Despite this, how employee engagement influences the health of UK care workers in particular has not been investigated. Furthermore with the increasingly ageing population there is a substantial requirement for adequate support, both for clients in residential care homes, and for those employed there [14].

There has been an increase in media and political interest in the use of zero-hours contracts, with these contractual arrangements described as exploitative and the leader of the UK Labour party arguing that their use should end [14]. Indeed, zero-hours contracts have recently been banned in New Zealand [15]. However, while temporary [16] and shift working patterns [17] have been shown to be associated with adverse health outcomes in employees, despite the recent interest the impact that zero-hours contracts have on employee health is unclear and under-researched. Furthermore, Bardasi and Francesconi [18] argue that it is unclear how studies into atypical employment generalise to those in other sectors and other contractual conditions such as zero-hours. Despite their widespread use, there is also no peer-reviewed evidence demonstrating the impact of zero-hours contracts on employees. Furthermore, despite calls for 'fair pay and conditions' for social care workers [19], the Chartered Institute of Personnel Development [20] found that 60% of all healthcare organisations utilise zero-hours contracts, with a further 29% of all employers expecting their employees to accept work when and if it is offered to them [21]. Indeed while 50% of care workers had zero-hours contracts in 2008/09 the number increased to 60% by 2011/12 [21]. Furthermore, Pinquart and Sonerssen [22] argued that care workers had high levels of responsibility and a restricted personal life due to the demands of their job, which may contribute to negative health outcomes, such as development of depression [23], although this study did not include professional

carers. There are therefore very few (if any) studies on the impact of zero-hours contracts on psychosocial working conditions and worker wellbeing, particularly in care workers. The aims of this study were therefore firstly to investigate the psychosocial working conditions, general mental health and levels of engagement, and the associations between these, in a sample of UK care workers, and secondly to investigate differences in these measures between care workers who have zero-hours contracts and those with fixed-hours contracts.

## **Methods**

The survey data for this cross-sectional study were collected between January and September 2016 from a self-selecting group of care organisations in London and the West Midlands in the UK. Three survey tools, as well as demographic questions, were included in order to investigate psychosocial working conditions, employee engagement and general mental health.

The Management Standards Indicator Tool (MSIT [9]) is a 35-item measure of psychosocial working conditions which was designed by HSE. It assesses seven psychosocial hazards (demands, control, support [both managerial and peer], relationships, role and change) shown to be related to negative health outcomes. Responses are given on a 5-point Likert scale from 1 (never) to 5 (always) for the first 23 questions, and 1 (strongly disagree) to 5 (strongly agree) for the remaining 12. The tool is valid and reliable [9]. The second tool used was the Utrecht Work Engagement Scale (UWES [11]), which is a widely-used and validated 17-item measure of employee engagement, consisting of vigour, dedication and absorption, and which has successfully been used alongside the MSIT in a previous study [24]. It is scored on a six-point Likert scale from 'never' to 'always'. Higher overall scores on the UWES suggest greater engagement, with benchmark scoring set out for overall engagement and each of the three components [11]. The final tool was the 12-item General Health Questionnaire (GHQ-12) [25], a commercially available scale from GL Assessment. Higher scores on this measure equate to lower psychological wellbeing, and it has been used to investigate general

levels of psychological wellbeing in groups. The GHQ is also used as a measure of psychological morbidity, and so is scored in two ways. First the binary scoring method, in which responses 'less than usual' and 'no more than usual' were awarded 0, and 'rather more than usual' and 'much more than usual' were awarded 1 point. Although a cut-off level for high likelihood of psychological morbidity from this bimodal scoring method has not been universally agreed, we adopted a cut-off score of 4 for this report [26]. Secondly we scored the sum total of GHQ-12 responses.

Questionnaires were administered either by hard copy or online across 22 care/support work organisations in the West Midlands and London. We approached management in 50 randomly-selected small to medium size privately owned care organisations but in no publically-run organisations. There were 25 in each region reflecting the working areas of the researchers. Of the 35 organisations which agreed, only those identifying themselves as small- or medium-sized organisations were asked to participate. Surveys were distributed in hard copy alongside employee rotas except in organisations that had online rota systems where the survey was distributed online via a dedicated and password-protected email link. In order to improve the response rate management actively encouraged the anonymous completion of the study by staff in their organisations.

Demographic information including age, ethnicity, education, length of service and contractual status were each collected. Zero-hours contracts were defined as those in which "no hours are specified or no work guaranteed" [28, p.263], and contracted hours where the individual employee was guaranteed at least 16 hours per week. Data were analysed using SPSS 22.0 (IBM Corp.). Independent sample t-tests were conducted to ascertain differences between management and staff on each of the measures, and those with differing contractual status (i.e. contracted work hours versus those with zero-hours contracts). Furthermore, multivariate linear regression analysis was conducted to evaluate the association between the seven MSIT variables, GHQ, and UWES. Ethical

approval was obtained from the Bath Spa University research ethics committee. If any individual scored above the suggested cut-off for the GHQ this was reported to the participating organisation (where this information was available), but this was not always possible where the participant did not give the name of their employing organisation.

## Results

The majority of surveys were distributed in hard copy (n=815, 90%) with the remainder distributed online (n=90, 10%). Out of 905 surveys distributed we received 199 responses, a response rate of 22%, with 15% (29) submitted online and 85% (170) as hard copy. Respondents were all professional care and/or support workers who worked either in care homes or in domiciliary (home) care. The mean age of respondents was 45, 86% were female and 84% were white British, which is representative of the direct care workforce in the UK [27]. Finally, 40% of respondents (80) were employed on zero-hours contracts, compared to 60% on contracted hours (119).

### TABLE 1 ABOUT HERE

Average scoring on the GHQ was 23.75(SD: 4.85) and mean bimodal score was 2.09, which indicates scoring below the cut-off point for psychological morbidity. However, 10% (19) scored over 4 on the GHQ-12 using the bimodal scoring system. 13 out of these 19 cases were on zero-hours contracts, despite these representing less than half of our sample.

Independent sample t-tests found no significant difference between those on zero-hours contracts and those with contracted work hours on any of the psychosocial hazards as measured by the MSIT or GHQ scoring. However, among those with zero hours' contracts mean scoring on the vigour component of the UWES was 4.56 (95% confidence interval (CI) 4.37-4.74) compared to 4.22 for contracted hours (95% CI 4.06-4.38), while the zero hours group scored 5.04 on the dedication component (95% CI 4.83-5.24) against 4.70 for contracted workers (95% CI 4.53-4.89), and average

total scoring on the UWES was 4.62 (95% CI 4.43-4.81) for zero-hours workers compared to 4.30 for contracted hours (95% CI 4.14-4.45). Each of these differences was significant at  $p < 0.05$ .

Furthermore, front-line care staff had significantly greater demands on their time (3.57, 95% CI 3.48-3.67) and lower levels of control (3.35, 95% CI 3.24-3.45) than management (3.36, 95% CI 2.94-3.54; and 3.80, 95% CI 3.65-4.14 respectively) on the MSIT ( $p < 0.05$ ). No difference was found on the remaining five factors. Similarly, no difference was found between the two groups on either mean GHQ or UWES scoring, or any of the UWES sub-factors.

#### TABLE 2 ABOUT HERE

Multivariate linear regression analyses (**Table 2**) indicated that across all UWES factors and both UWES and GHQ mean total scoring, employee understanding of their role in the organisation was significantly related to each. Indeed, role alone explained 17%, 21%, and 9% of the variance in the vigour component of UWES, total UWES scoring and total GHQ scoring respectively. Role and peer support together explained 26% of variance in the dedication component of the UWES, and role and demands explained 18% of variance in absorption.

## Discussion

This study demonstrated that five of the seven psychosocial hazards measured by the MSIT were satisfactory for all respondents in our sample. Low scores in both role and control suggest they should be a priority for improvement. Indeed, it appeared to be the respondents' understanding of their role in the organisation which most heavily contributed to the measured outcomes. Across all participants each engagement factor and overall scoring on engagement was moderate, suggesting that respondents were moderately engaged in their job, and GHQ bimodal scoring was below cut-off levels. Also while there were no differences in scoring on psychosocial working conditions and general mental wellbeing between those with zero-hours contracts and those with contracted hours, zero-hours respondents had greater levels of engagement with their job role. However, bimodal scoring on the GHQ of 4 and above occurred in 19 cases, with more of these cases occurring among



those with zero-hours (13) than fixed-hours contracts (6 cases), despite those with zero-hours representing a smaller percentage of respondents. Finally, care workers had greater occupational demands and lower levels of control than management as measured by the MSIT, although no difference in scoring on the other measures was recorded.

This study makes some new contributions to the literature. It is among the first to look at working conditions for those on zero-hours contracts and professional care workers in the UK, and the first to investigate the effects of these contractual arrangements on employee engagement and psychological wellbeing. Prior to this study, the effects of working conditions on professional carers' health were under-investigated. For example, Pinquart and Sorenson [23] and Vitaliano et al. [24] demonstrated that care working had a negative effect on health and wellbeing. However, these studies focused on individuals who cared for family members, rather than individuals employed as care workers who provide care to a number of people in one or more care environments. Furthermore, to our knowledge there have been no studies of care worker engagement or general psychological wellbeing, despite engagement in particular having a demonstrable effect on clinical and individual outcomes in hospital settings [12]. It may come as no surprise however that individual understanding of role in the organisation had an impact on outcomes. The job role of care and support workers is hugely varied, and thus clarification of this may be important [29].

One surprising result from this study is the lack of difference in wellbeing measures between care workers and managers despite care workers having considerably greater demands and lower control over their work. This would be described as the 'strain' hypothesis in the Job Demands Control model of workplace stress [5]. One potential explanation for this is that measures of peer support and relationships were both at acceptable levels, and thus buffered against these effects [6].

Finally, it is becoming increasingly evident that working conditions such as working shifts [17] or temporary working patterns [16] can adversely affect employee health and wellbeing. However, there have been very few (if any) studies prior to this which investigate the difference between those on zero-hours and those on fixed hours' contracts. While we found no statistically significant difference in wellbeing measures, we did observe a higher proportion of those on zero-hours contracts with GHQ scores above the cut-off threshold than those with fixed term contracts. This needs further investigation in longitudinal studies and further investigation in those with increased likelihood of developing mental health disorders. Furthermore, the cross-sectional nature of our study, with most respondents being care work employees from just two regions of the UK, is a weakness of the study. Lastly, due to low response rates there is the possibility of bias and the results should be interpreted with caution. Furthermore, there may have been selection bias among the organisations which agreed to take part in the project. However, some of this effect may be mediated by the demographic profile of respondents in this project being similar to that in the UK as a whole [28].

In summary, our results suggest that UK care workers' understanding of their role and the amount of control that they have over their job requires improvement. However, they are moderately engaged in their job. Additionally, zero-hours contracts do not seem to affect adversely the general wellbeing of most care workers, although there was a greater proportion of care workers on zero-hours contracts who scored negatively on a GHQ measure of general mental health than those on contracted hours.

**Key points:**

- In this sample of UK care workers, we observed that deficiencies in respondents' understanding of their role and the amount of control over their work were significant psychosocial workplace hazards which require improvement.
- Care worker understanding of their role in the workplace had an impact on wellbeing and engagement outcomes.
- While these results do not appear to demonstrate that zero-hours contracts adversely influence employee health and wellbeing, a greater proportion of individuals on zero-hours contracts than fixed hours' contracts scored above GHQ threshold scores for psychological health.

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**Table 1:** Descriptive information for respondents to the survey. Higher scoring represents ‘better’ working conditions.

Measure	Factor	Scores by Employment Type				Scores by Contract Status			
		Zero-Hours (n=80)		Contracted Hours (n=119)		Management (n= 43)		Care Workers (n= 156)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
MSIT	Demands*	3.56	0.78	3.50	0.74	3.36	0.85	3.57	0.72
	Control	3.31	0.87	3.52	0.75	3.80	0.70	3.35	0.80
	M. Support	3.84	0.90	3.87	0.83	3.89	0.81	3.86	0.88
	P. Support	4.07	0.69	4.07	0.66	3.99	0.59	4.09	0.67
	Relationships*	4.19	0.70	4.17	0.76	4.16	0.65	4.08	0.75
	Role	4.56	0.48	4.59	0.50	4.46	0.47	4.53	0.46
	Change	3.61	0.84	3.61	1.50	3.77	0.60	3.68	1.39
UWES	Vigor	4.56	0.93	4.22	1.03	4.24	1.02	4.34	1.00
	Dedication	5.04	0.98	4.70	1.12	4.68	1.01	4.82	1.08
	Absorption	4.34	1.07	4.02	1.14	4.00	1.00	4.12	1.14
	Total	4.62	0.92	4.30	1.02	4.29	4.40	4.41	1.01
GHQ Total Scoring*		23.1	0.36	24.0	0.42	24.2	5.83	23.7	4.45

\* Scoring on these factors is reversed, i.e. higher scoring represents worse status.

MSIT = Management standards indicator tool; UWES = Utrecht work engagement scale; GHQ = General health questionnaire



**Table 2:** Linear regression results of the association between MSIT domains and both UWES and GHQ factors as dependent variables.

Tool	Factor	Significantly Related Factors	Coefficient Estimate (B)	T	P	R <sup>2</sup>	Adjusted R <sup>2</sup>
UWES	Vigor	Role	0.414	6.30	<0.001	0.17	0.17
	Dedication	Role	0.414	2.78	<0.001	0.26	0.25
		Peer Support	0.184	6.26	<0.01		
	Absorption	Role	0.455	6.54	<0.001	0.18	0.17
		Demands	-0.160	-2.30	<0.05		
	Mean total	Role	0.458	7.13	<0.001	0.21	0.21
GHQ total		Role	-0.29	-4.24	<0.001	0.09	0.08

MSIT = Management standards indicator tool; UWES = Utrecht work engagement scale; GHQ =

General health questionnaire